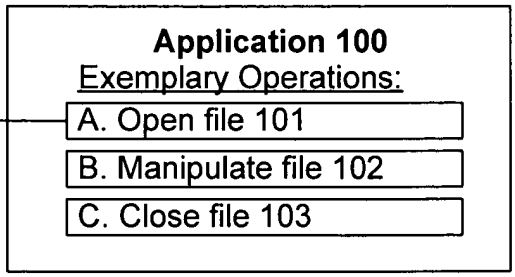

Test Scenarios For 2 Variables 110

Operating systems 120

Processor Family Types 130	Windows XP	Windows 2000	Mac OS X
Intel Celeron	X	X	X
AMD Thunderbird	X	X	X
Intel Pentium IV	X	X	X

(Total Tests = (# in variable 1) x (# in variable 2) = 3 x 3 = 9)

Test Scenarios For 3-8 Variables 140

Number of variables 150

Number of variations within each variable 160	3	4	5	6	7	8
4	64	256	1024	4096	16384	65536
5	125	625	3125	15625	78125	390625
6	216	1296	7776	46656	279936	1679616

Fig. 1

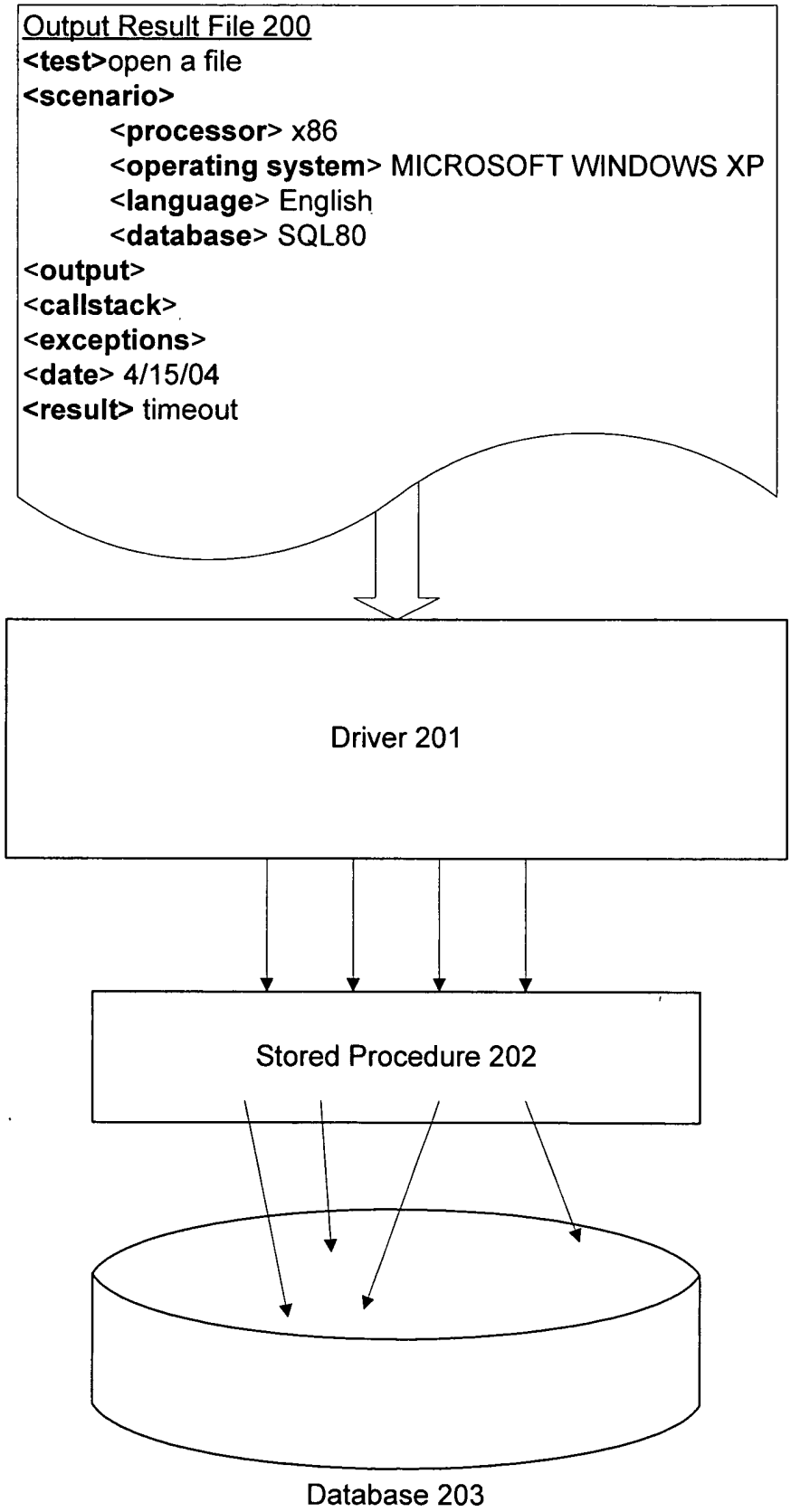
Output Result File 200
<test>open a file
<scenario>
<processor> x86
<operating system> MICROSOFT WINDOWS XP
<language> English
<database> SQL80
<output>
<callstack>
<exceptions>
<date> 4/15/04
<result> timeout
Driver 201
Stored Procedure 202
Database 203

Fig. 2

Collapsing Failures

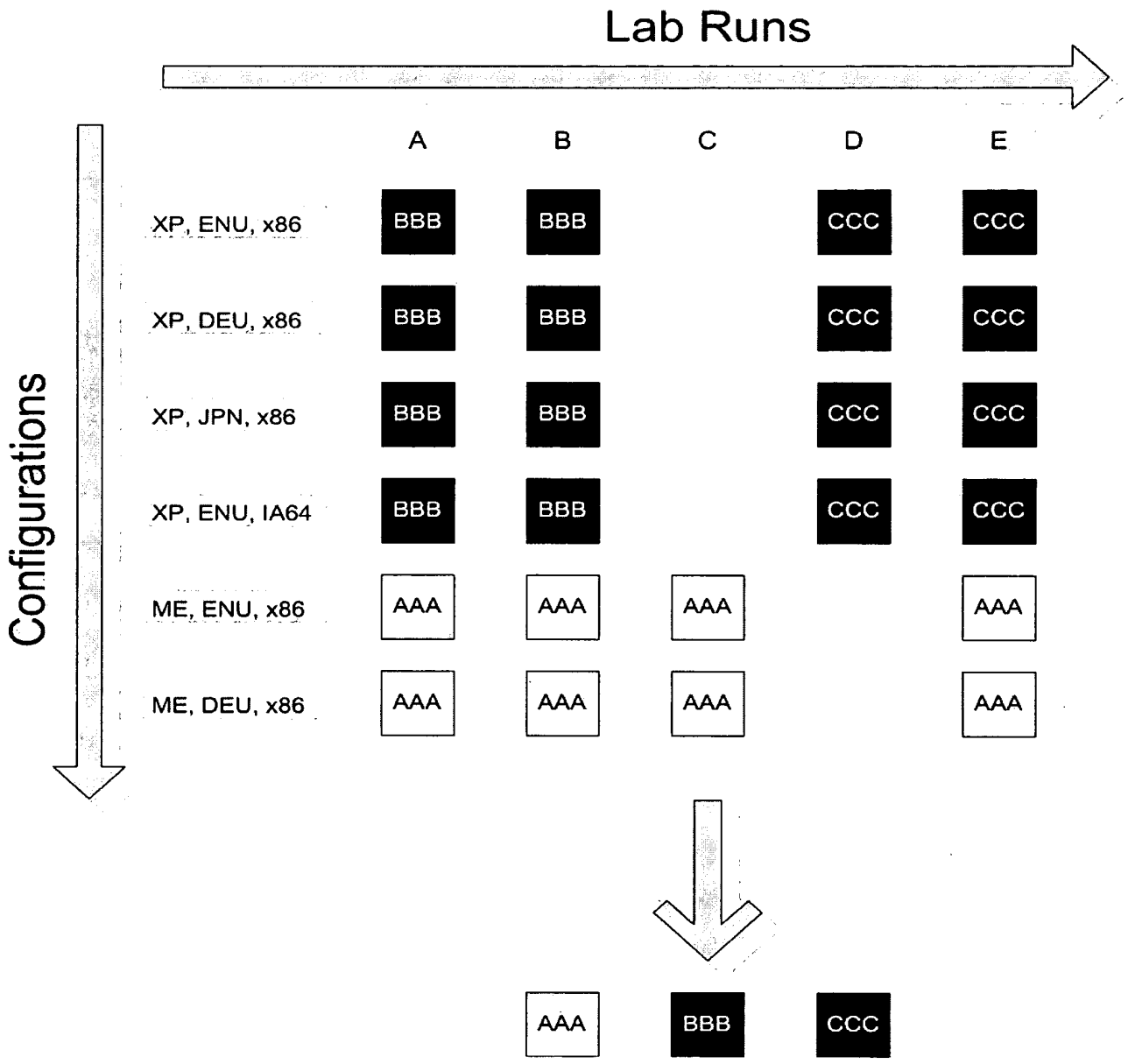

Fig. 3

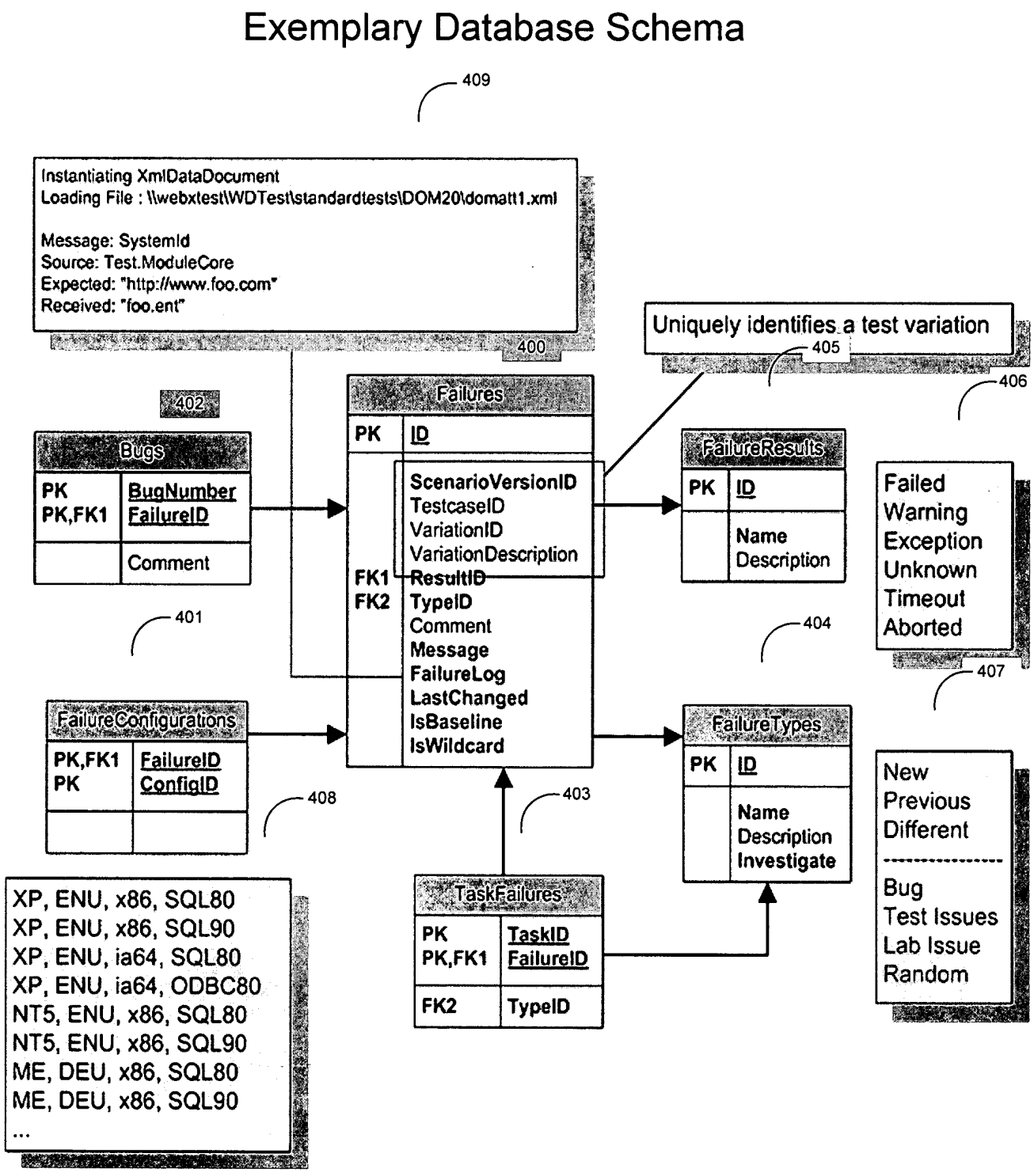
Exemplary Database Schema
409
Instantiating XmlDataDocument
Loading File : \\webxtest\WDTest\standardtests\DOM20\domatt1.xml
Message: SystemId
Source: Test.ModuleCore
Expected: "http://www.foo.com"
Received: "foo.ent"
400
Uniquely identifies a test variation
405
406
402
Bugs
PK
PK,FK1
BugNumber
FailureID
Comment
Failures
PK
ID
ScenarioVersionID
TestcaseID
VariationID
VariationDescription
FK1
ResultID
FK2
TypeID
Comment
Message
FailureLog
LastChanged
IsBaseline
IsWildcard
FailureResults
PK
ID
Name
Description
Failed
Warning
Exception
Unknown
Timeout
Aborted
401
404
407
FailureConfigurations
PK,FK1
PK
FailureID
ConfigID
408
403
FailureTypes
PK
ID
Name
Description
Investigate
New
Previous
Different
Bug
Test Issues
Lab Issue
Random
XP, ENU, x86, SQL80
XP, ENU, x86, SQL90
XP, ENU, ia64, SQL80
XP, ENU, ia64, ODBC80
NT5, ENU, x86, SQL80
NT5, ENU, x86, SQL90
ME, DEU, x86, SQL80
ME, DEU, x86, SQL90
...
TaskFailures
PK
PK,FK1
TaskID
FailureID
FK2
TypeID

Fig. 4

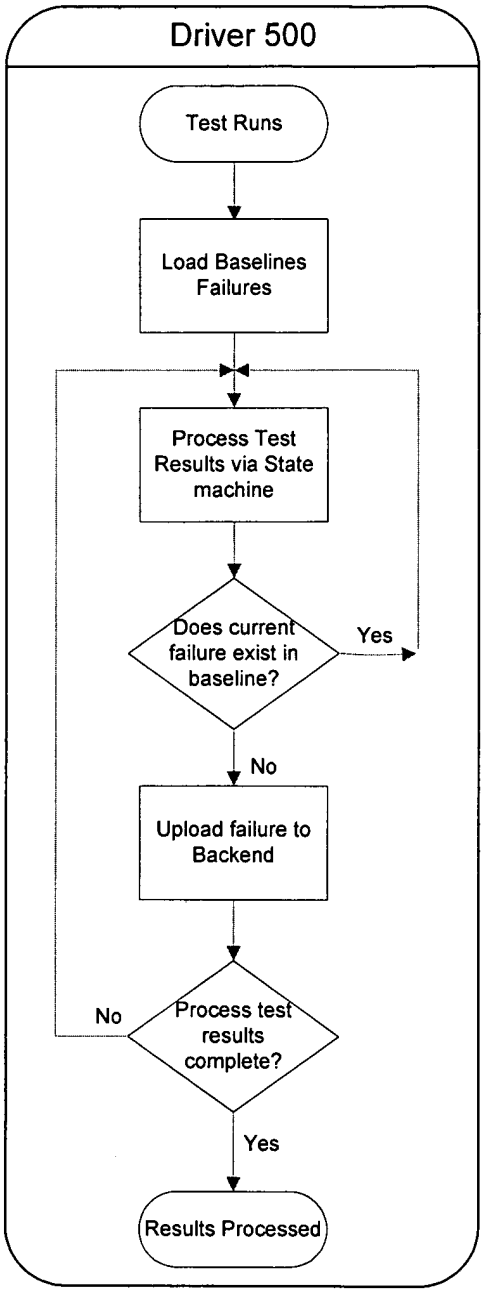
Driver 500
Test Runs
Load Baselines Failures
Process Test Results via State machine
Does current failure exist in baseline?
Yes
No
Upload failure to Backend
Process test results complete?
No
Yes
Results Processed

Fig. 5

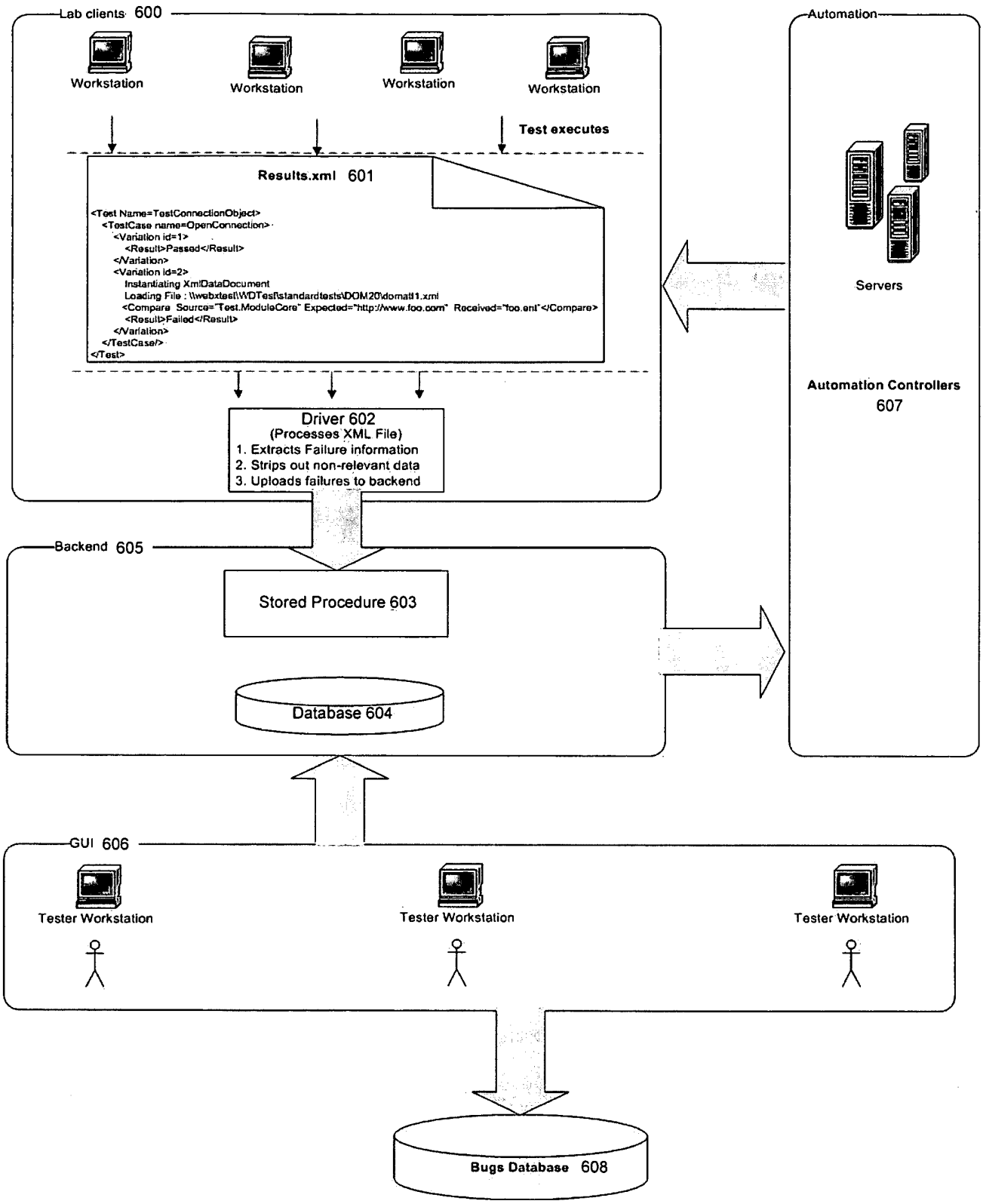
Lab clients 600
Workstation
Workstation
Workstation
Workstation
Test executes
Results.xml 601
<Test Name=TestConnectionObject>
<TestCase name=OpenConnection>
<Variation id=1>
<Result>Passed</Result>
</Variation>
<Variation id=2>
Instantiating XmlDataDocument
Loading File : \\webxtest\WDTest\standardtests\DOM20\domatt1.xml
<Compare Source="Test.ModuleCore" Expected="http://www.foo.com" Received="foo.ent"</Compare>
<Result>Failed</Result>
</Variation>
</TestCase/>
</Test>
Driver 602
(Processes XML File)
1. Extracts Failure information
2. Strips out non-relevant data
3. Uploads failures to backend
Automation
Servers
Automation Controllers
607
Backend 605
Stored Procedure 603
Database 604
GUI 606
Tester Workstation
Tester Workstation
Tester Workstation
Bugs Database 608

Fig. 6

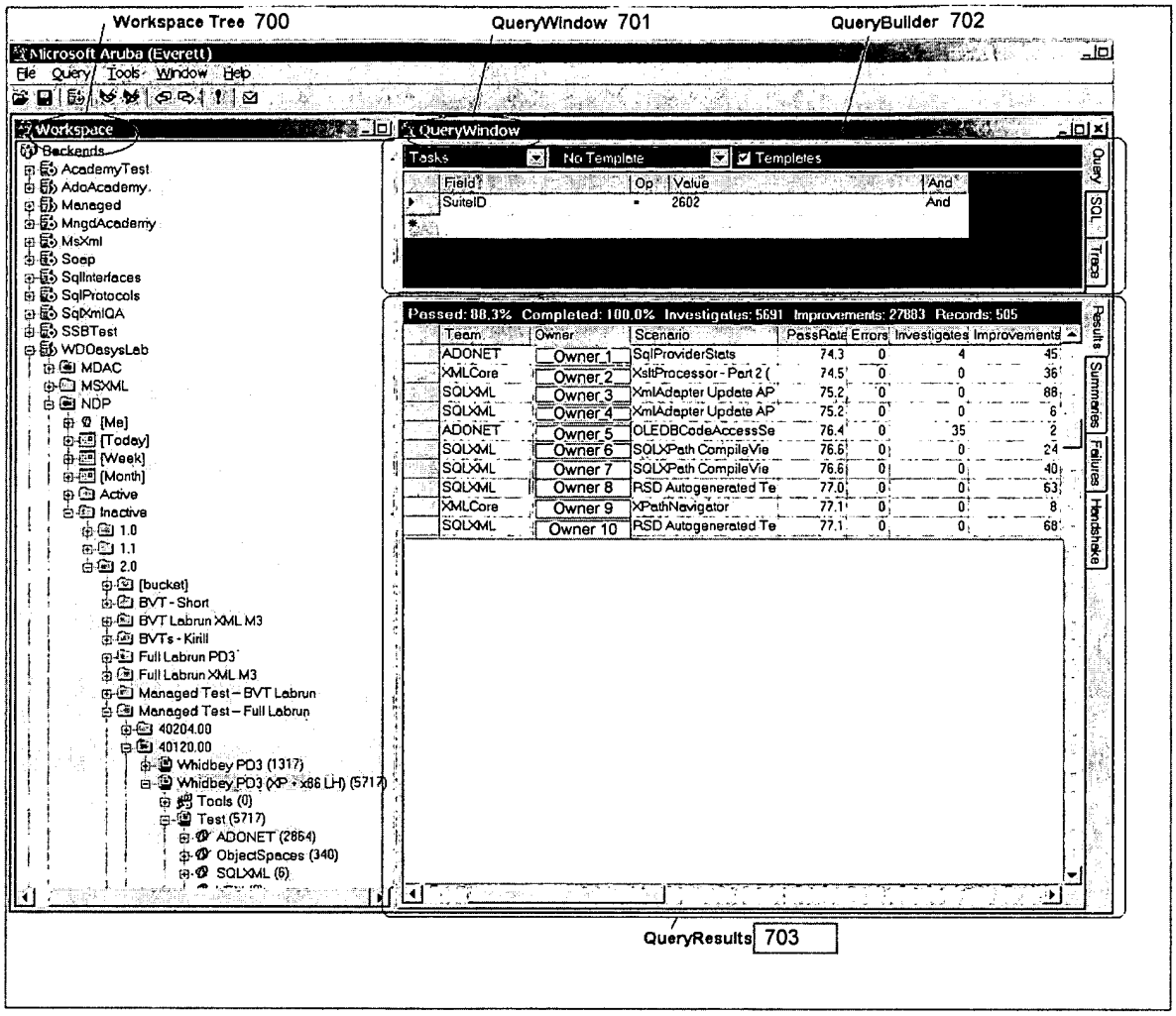
Workspace Tree 700
QueryWindow 701
QueryBuilder 702
Microsoft Aruba (Everett)
File Query Tools Window Help
Workspace
Backends
AcademyTest
AdoAcademy
Managed
MngdAcademy
MsXml
Soap
SqlInterfaces
SqlProtocols
SqlXmlQA
SSBTest
WDDesysLab
MDAC
MSXML
NDP
[Me]
[Today]
[Week]
[Month]
Active
Inactive
1.0
1.1
2.0
[bucket]
BVT - Short
BVT Labrun XML M3
BVTs - Kirill
Full Labrun PD3
Full Labrun XML M3
Managed Test – BVT Labrun
Managed Test – Full Labrun
40204.00
40120.00
Whidbey PD3 (1317)
Whidbey PD3 (XP - x86 LH) (5717)
Tools (0)
Test (5717)
ADONET (2864)
ObjectSpaces (340)
SQLXML (6)
QueryWindow
Tasks
No Template
Templates
Field
Op
Value
And
SuiteID
2602
And
Query
SQL
Trace
Passed: 88.3% Completed: 100.0% Investigates: 5691 Improvements: 27883 Records: 505
Team
Owner
Scenario
PassRate
Errors
Investigates
Improvements
ADONET Owner 1 SqlProviderStats 74.3 0 4 45
XMLCore Owner 2 XsltProcessor - Part 2 (74.5 0 0 36
SQLXML Owner 3 XmlAdapter Update AP 75.2 0 0 88
SQLXML Owner 4 XmlAdapter Update AP 75.2 0 0 6
ADONET Owner 5 OLEDBCodeAccessSe 76.4 0 35 2
SQLXML Owner 6 SQLXPath CompileVie 76.6 0 0 24
SQLXML Owner 7 SQLXPath CompileVie 76.6 0 0 40
SQLXML Owner 8 RSD Autogenerated Te 77.0 0 0 63
XMLCore Owner 9 XPathNavigator 77.1 0 0 8
SQLXML Owner 10 RSD Autogenerated Te 77.1 0 0 68
Results
Summaries
Failures
Handshake
QueryResults 703

Fig. 7

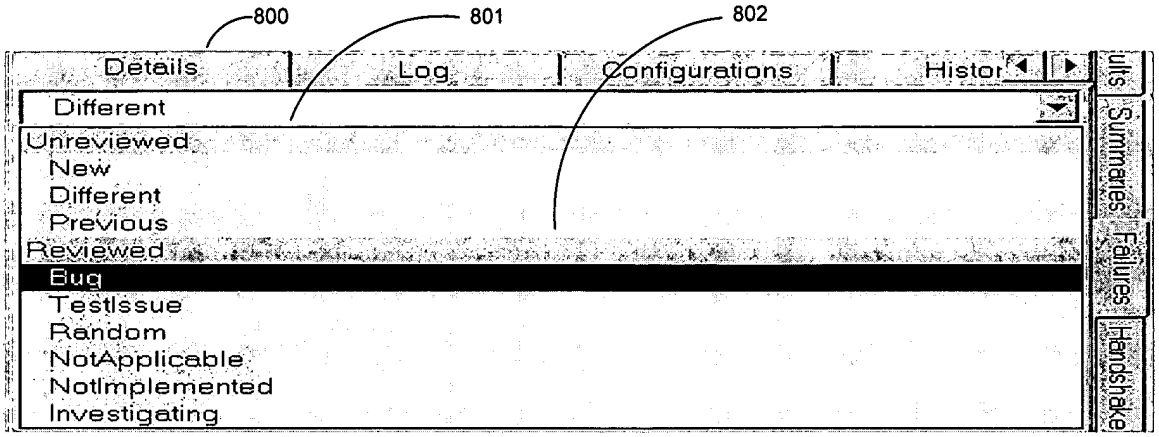
800
801
802
Details
Log
Configurations
Histor
Different
Unreviewed
New
Different
Previous
Reviewed
Bug
TestIssue
Random
NotApplicable
NotImplemented
Investigating
Summaries
Failures
Handshake

Fig. 8

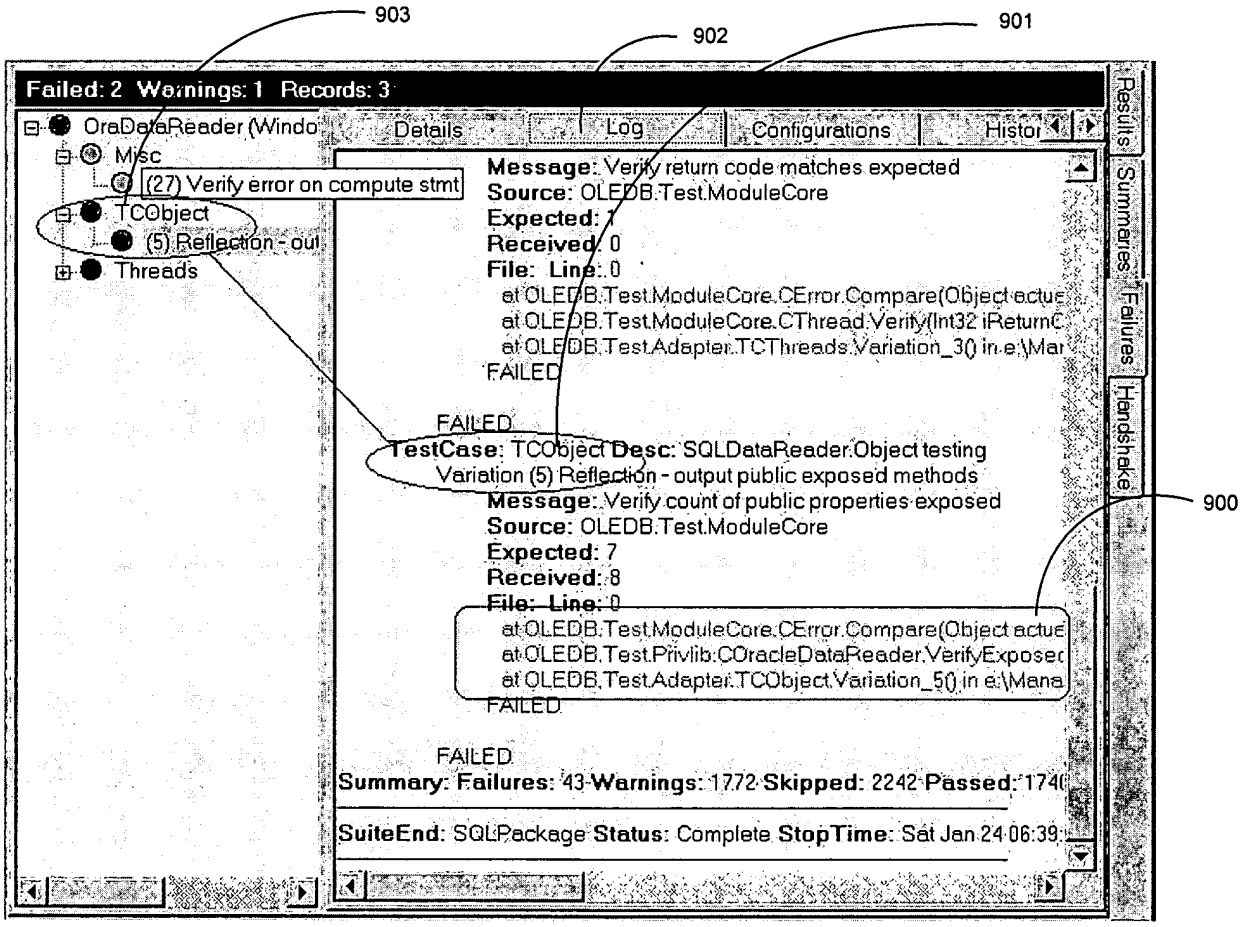
903
902
901
900
Failed: 2 Warnings: 1 Records: 3
OraDataReader (Windo
Misc
(27) Verify error on compute stmt
TCObject
(5) Reflection - out
Threads
Details
Log
Configurations
Histor
Message: Verify return code matches expected
Source: OLEDB.Test.ModuleCore
Expected: 1
Received: 0
File: Line: 0
at OLEDB.Test.ModuleCore.CError.Compare(Object actue
at OLEDB.Test.ModuleCore.CThread.Verify(Int32 iReturnC
at OLEDB.Test.Adapter.TCThreads.Variation_3() in e:\Mar
FAILED
FAILED
TestCase: TCObject Desc: SQLDataReader.Object testing
Variation (5) Reflection - output public exposed methods
Message: Verify count of public properties exposed
Source: OLEDB.Test.ModuleCore
Expected: 7
Received: 8
File: Line: 0
at OLEDB.Test.ModuleCore.CError.Compare(Object actue
at OLEDB.Test.Privlib.COracleDataReader.VerifyExposed
at OLEDB.Test.Adapter.TCObject.Variation_5() in e:\Mana
FAILED
FAILED
Summary: Failures: 43 Warnings: 1772 Skipped: 2242 Passed: 174
SuiteEnd: SQLPackage Status: Complete StopTime: Sat Jan 24 06:39:
Results
Summaries
Failures
Handshake

Fig. 9

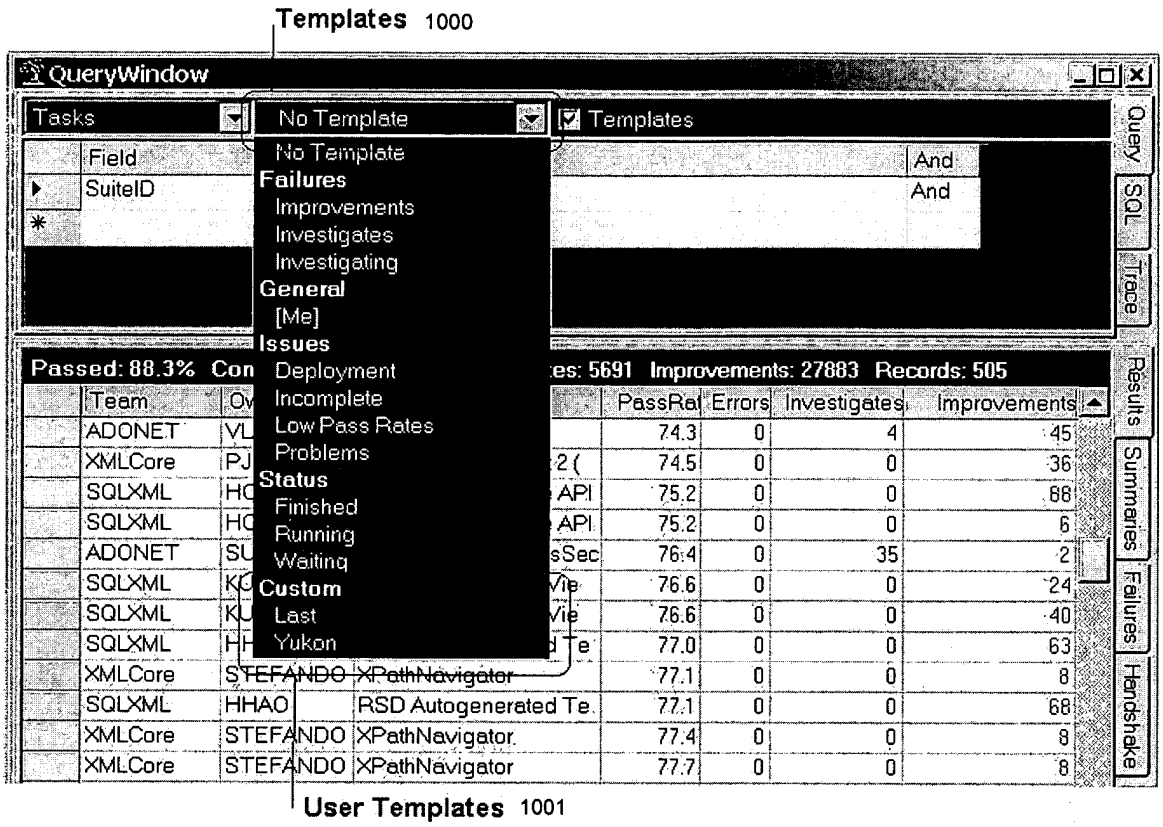
Templates 1000
QueryWindow
Tasks
No Template
Templates
Field
SuiteID
And
No Template
Failures
Improvements
Investigates
Investigating
General
[Me]
Issues
Deployment
Incomplete
Low Pass Rates
Problems
Status
Finished
Running
Waiting
Custom
Last
Yukon
Passed: 88.3%
Improvements: 27883 Records: 505
Team
PassRat
Errors
Investigates
Improvements
ADONET 74.3 0 4 45
XMLCore 74.5 0 0 36
SQLXML 75.2 0 0 66
SQLXML 75.2 0 0 6
ADONET 76.4 0 35 2
SQLXML 76.6 0 0 24
SQLXML 76.6 0 0 40
SQLXML 77.0 0 0 63
XMLCore STEFANDO XPathNavigator 77.1 0 0 8
SQLXML HHAO RSD Autogenerated Te 77.1 0 0 68
XMLCore STEFANDO XPathNavigator 77.4 0 0 8
XMLCore STEFANDO XPathNavigator 77.7 0 0 8
Query
SQL
Trace
Results
Summaries
Failures
Handshake
User Templates 1001

Fig. 10

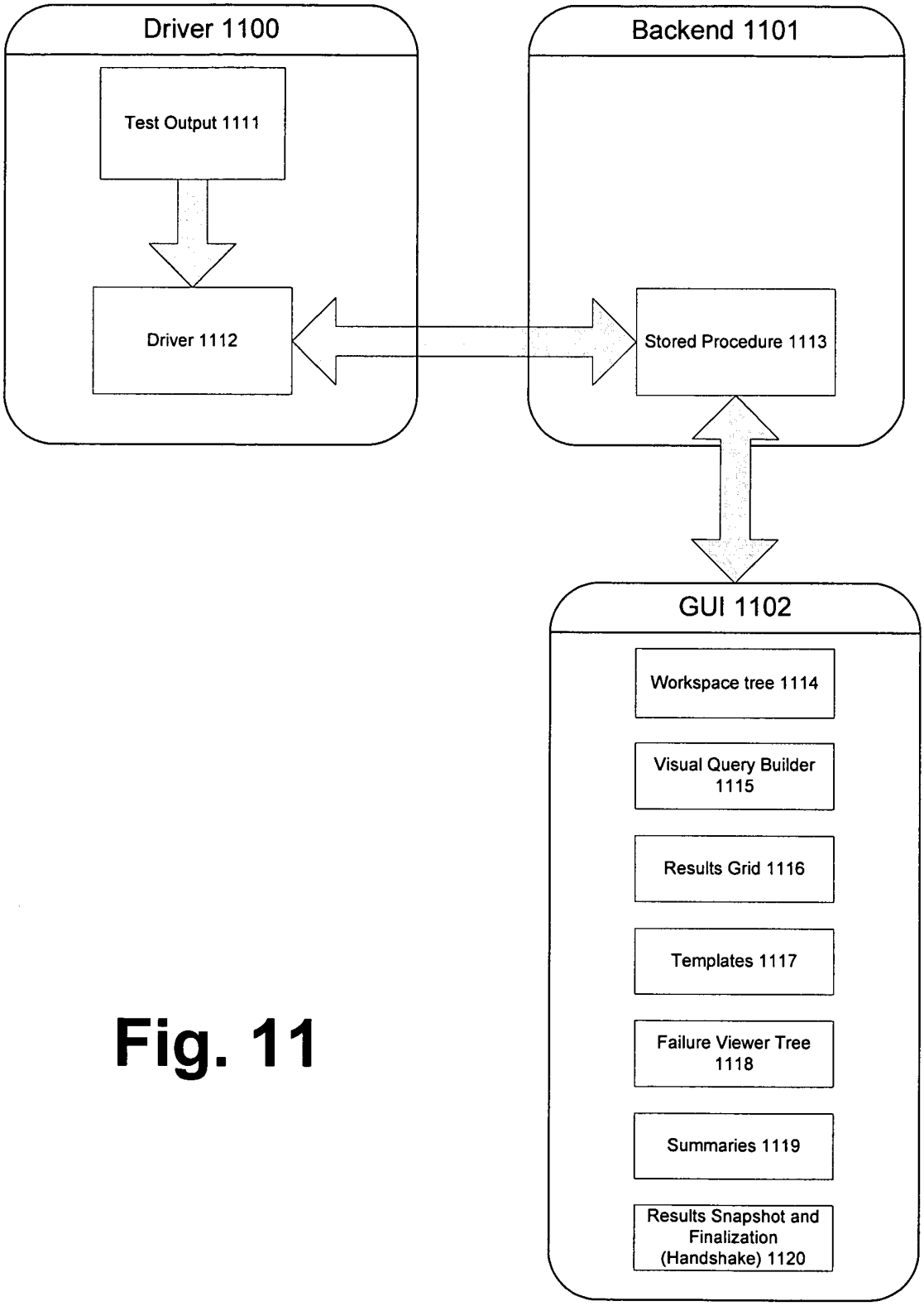
Driver 1100
Test Output 1111
Driver 1112
Backend 1101
Stored Procedure 1113
GUI 1102
Workspace tree 1114
Visual Query Builder 1115
Results Grid 1116
Templates 1117
Failure Viewer Tree 1118
Summaries 1119
Results Snapshot and Finalization (Handshake) 1120

Fig. 11

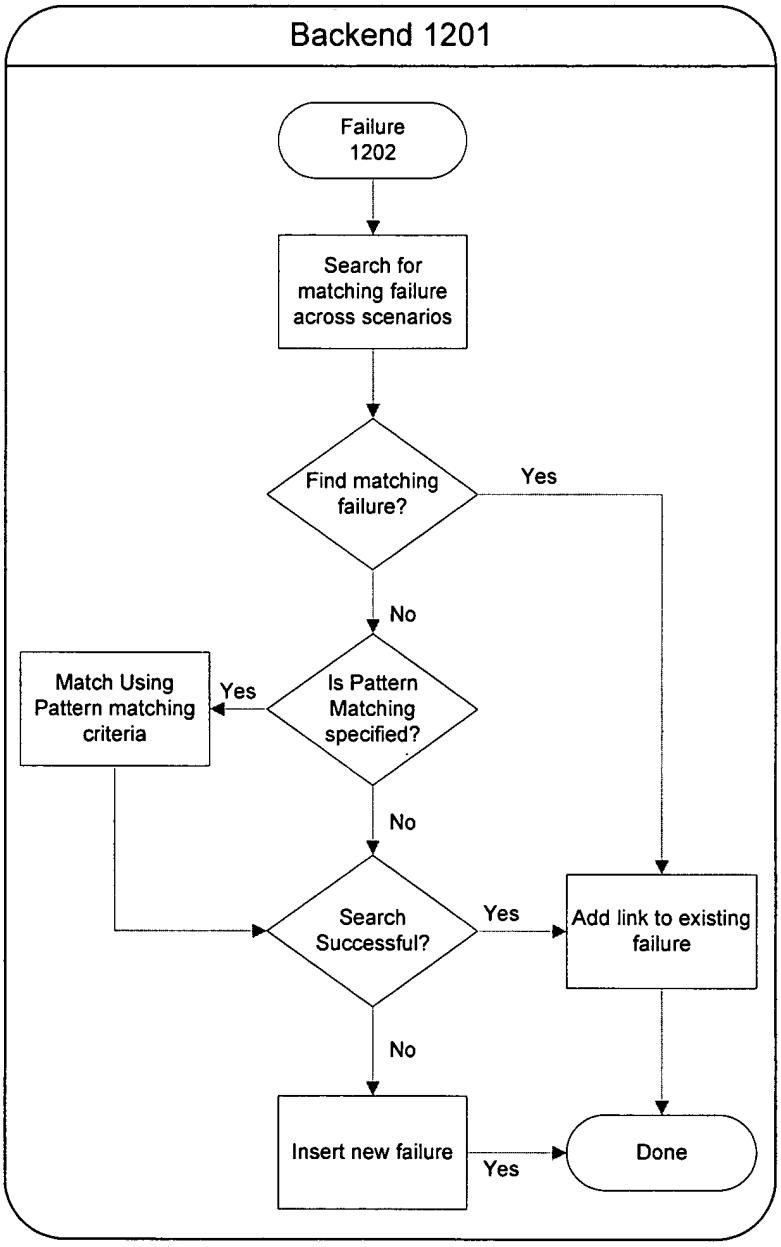
Backend 1201
Failure 1202
Search for matching failure across scenarios
Find matching failure?
Yes
No
Match Using Pattern matching criteria
Yes
Is Pattern Matching specified?
No
Search Successful?
Yes
Add link to existing failure
No
Insert new failure
Yes
Done

Fig. 12